

Resident's Satisfaction Level on the Quality of the Row House and the Environment

Syamfitriani Asnur*, Muhammad Ardi, Moh. Ahsan S. Mandra

School of Population and Environmental Education, Makassar State University, Makassar 90222, Indonesia

*Corresponding author. Email: syamfitriani@gmail.com

ABSTRACT

Row houses have developed in Indonesia since the 1970s. This increase in houses is according to the dynamics of population growth in urban areas. The row house is a building that is not stacked with a floor area of not more than 70m², which is built on land with an area of 54-100m² plots. This study reveals the residents' satisfaction with the house's condition and environment. The researchers used descriptive quantitative methods in percentage figures to reveal occupant satisfaction in various aspects of the house's condition and its environment. This study used questionnaires to assess the satisfaction of 250 residents of row houses in Makassar. Aspects of the house condition include the shape of the facade, space requirements, lighting levels, ventilation, open space, materials, and space functions. Environmental aspects include neighborhood road conditions, residential facilities, clean water networks, waste management, and accessibility. The results showed that, in general, the occupants had a low level of satisfaction with the house's condition and its environment. In the aspect of the house condition, the occupants are generally dissatisfied with the compliance of the space function needs. Furthermore, the occupants generally show low satisfaction with the neighborhood road conditions. The results of this study become the consideration for developers in environmental management in row houses.

Keywords: *Management, Occupant, and Neighborhood*

1. INTRODUCTION

The house is one of the primary needs for humans to carry out their daily activities in a relaxed state. A good and quality residential environment will produce comfort for the community. Therefore, residential satisfaction is a measuring tool for the settlers' assessment of the quality of their residential environment [1], [2]. The assessment of comfort measures human needs for the house's condition and its environment. While the cultural and socio-economic factors greatly influence the community's assessment of the environment. As a result, some experts judge that the perception assessment has a high level of subjectivity. The satisfaction assessment with the settlement is one part of the live ability city study. China uses a variety of factors. The comfort of the people who live in the city and their convenience in utilizing public facilities are indicators of community assessment. [3] describes the results of the Livability city assessment on the American population, namely infrastructure and physical attributes and safety and accessibility to business areas as part of the home user assessment.

Zhan et al. [4] revealed that community satisfaction with urban sustainability includes housing and non-housing aspects. The non-residential aspect is related to traveling from one place to another and other activities

outside the residential environment. In urban development planning, subjective assessments of community perceptions are also considered. However, the government tends to forget about this subjective assessment. This study was conducted to reveal the public's perception of the quality of the environment in which they live. With knowledge of user satisfaction, efforts to improve environmental quality can be carried out appropriately based on community satisfaction.

The research was conducted using a descriptive quantitative approach by giving questions to the public in the form of a distributed questionnaire—level of user satisfaction with environmental factors as part of urban live ability indicators. The higher the level of satisfaction of living, the higher the level of the live ability of a settlement.

People will show a sense of satisfaction with the environment if they feel that all the things needed in housing are met. [5]. Various previous studies have proven a significant effect on environmental quality and building quality on occupant satisfaction. The level of satisfaction with environmental quality is more excellent than user satisfaction with building quality. Other researchers reveal that building quality, design, and price significantly influences occupant satisfaction. A similar study was also conducted by [6], showing that environmental hygiene conditions strongly influenced

occupant satisfaction. Meanwhile, [5] stated that the most significant factor in influencing occupant satisfaction was the quality of housing followed by the quality of the social environment in the housing. Some of these studies show that various factors affect residents' level of satisfaction, especially the housing condition itself outside of social and economic characteristics.

2. METHOD

This research on community satisfaction with row houses' quality and environment uses a quantitative descriptive approach. The research variables have been determined in advance based on the existing literature, and the data processing is mainly done statistically. This study examines the effect of housing conditions on occupant satisfaction with the variables revealed in Table 1.

Table 1. Variable and Indicators

Variable	Indicators	Variable	Indicators
Residential environment	Road conditions	Home Physical Condition	Building facade
	Environmental facilities		Space requirements
	Availability of clean water		Space function
	Drainage		Lighting level
	Garbage		Ventilation
	Accessibility		Open Space Materials

The sample in this study was taken based on a simple random sampling technique with the Slovin method as many as 250 families. Primary data collection was carried out using a questionnaire-based method. The questionnaire to collect data on occupant satisfaction uses a Likert scale of 1 – 5 (1=very dissatisfied, 2=not satisfied, 3= moderately satisfied, 4=satisfied, 5=very satisfied) to measure occupants' perceptions of the variables. It is tested so that the type of data collected is ordinal data (stratified data).

The categories of residents who can be sampled are residents aged 19-50 years and who have lived in housing for more than one year. The level of satisfaction is measured using the Residential Satisfaction Index (RSI) issued by the Minister of Administrative Reform Regulation No. 14 of 2017 concerning Guidelines for Community Satisfaction Assessment, with the formula:

$$RSI = \frac{\text{Total of Perception Value of Indicator}}{\text{The number of indicators}} \times 100$$

The results obtained are classified into five classes, namely, deficient (1.00-1.79), low (1.80-2.59), moderate/moderate (2.60-3.39), high (3.40-4.19), and

very high (4.20-5). Researchers use descriptive analysis to explain the results of data collection.

3. RESULT AND DISCUSSION

3.1. Characteristics of Respondent

The respondents' answers to the questionnaire show that most of the row houses residents in Makassar have property rights. Respondents also generally work as employees in private or government agencies with an average income of IDR 3,000,000 - IDR 6,000,000 per month. 38% earn more than IDR 6,000,000 per month of the total respondents. The education level of the row house residents is generally quite good. This is based on a frequency analysis that 54% of household heads have received undergraduate education and 5% of residents have doctoral education. Five people in one housing unit generally inhabit row houses. However, 25% of respondents have more than seven family members in one dwelling. This shows a reasonably high-density level in one dwelling, especially when viewed from the form of housing owned and its area. The description of the characteristics of the occupants of the row house is contained in Table 2.

Table 2. Characteristics of Row House Occupants

Occupant		Percentage
Occupancy	Owner	85
	Rent	15
Lots of families Members	≤ 4	9
	5<7	66
	>8	25
Level of Education	Middle School	3
	High School	21
	Graduate	54
	Post Graduate	17
	S3	5
Occupation	Civil	30
	Employee	35
	Entrepreneur	11
	Teacher/Lecturer	16
	Student	8
Income for month	< Rp.3.000.000	14
	Rp. 3.000.000	48
	Rp. 6.000.000	
	>Rp.6.000.000	38
House area	< 60 m ²	5
	60 m ² > 90m ²	74
	> 90 m ²	21

Occupant		Percentage
Storied House	1	71
	≥ 2	29

Regarding of shape of the house, most of the respondents live in non-story houses, and only 29% of residents have two-story or more dwellings with an area of more than 90 m².

3.2. Community Satisfaction with the Quality of Row Houses

The actual physical condition of row houses cannot be measured because they generally have changed according to the development of the economic level of the occupants and the maintenance carried out by the occupants. In general, the rating index given by residents to the house's condition is 2.78, which is classified in the moderate or moderate category. Based on Figure 1, the occupants' assessment of the need for space and open space is the aspect that has the lowest score compared to other aspects.

The results of the questionnaire analysis show that there are 61% of residents feel that the limited space for their activities, therefore they were difficult to arrange the furniture. Besides that, the respondent also released the limited availability of space to carry out activities. 26% of residents sleep in more than three people's rooms. Most residents complained about the lack of green open space in their homes, although they admitted that at first, they had one. This is because most residents have added space, either bedrooms or other additional space needs, by building and spending the entire plot of land, even though 36% of residents are satisfied with the green open space in their homes even though the area is limited.

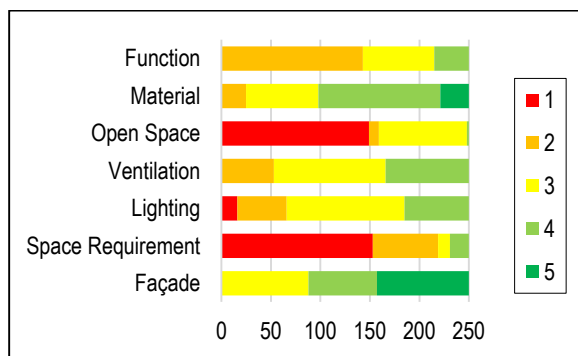


Figure 1. Community Assessment of the Quality of the Row House (Assessed Indicators of Rowhouse)

Another impact of the absence of open space is the reduced sunlight entering the house. As many as 7% of residents released that there is no sunlight entering their bedroom, so they always rely on artificial lighting even during the day. However, most residents feel pretty satisfied with the ventilation conditions because they rely on artificial ventilation to get comfortable ventilation. As for the function of space in the dwelling, on average,

residents are satisfied, even though they use one room for more than two functions.

Most residents are satisfied with the appearance of the facade of their house, even 36% claim to be very satisfied because of the attractive design and color. Only 10% of residents gave a low rating for the building material aspect because they thought about the health aspect of the building finishing materials used. Still, the rest were satisfied with the building materials used.

Figure 2 shows that the highest level of community satisfaction with row houses in Makassar is located on the building facade with a score of 3.61, which is interpreted as a satisfying level. The shape of the facade is considered satisfactory for the community, judging by the colors and designs offered by the row houses.

Meanwhile, the lowest level of satisfaction is on space requirements with a value of 1.49, which is interpreted as very dissatisfied. This is because the average initial design of a row house is limited to the core space, namely the living room, 2-3 bedrooms, kitchen, and bathroom.

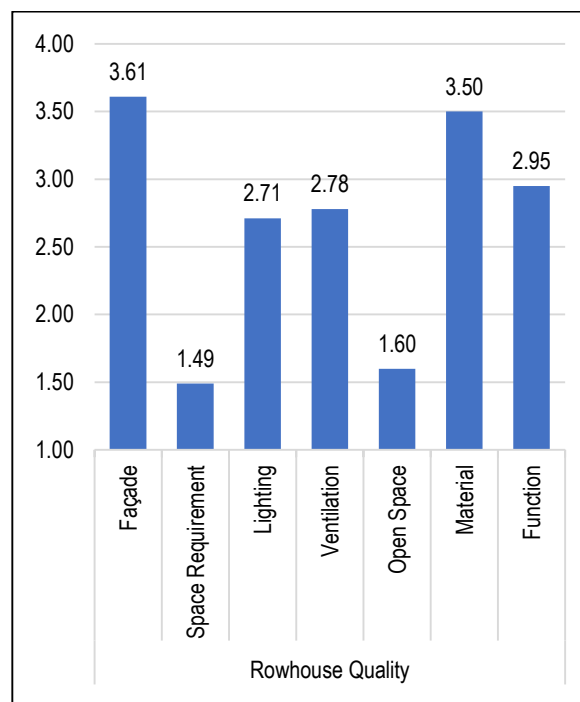


Figure 2. Level of occupant satisfaction with the quality of the rowhouse.

3.3. Community Satisfaction with the Environment

Occupant satisfaction is a form of occupant evaluation of the conditions he received while living in a housing estate to be expressed in a satisfaction level score.

In general, the row housing environment in the city of Makassar currently has relatively good facilities. Various facilities are available in the housing, such as a place to

exercise, a playground, a mosque, a security office. In comparison, some other facilities are outside the housing, so residents must travel a certain distance to reach them, such as schools, shopping places, hospitals. Figure 3 shows the residents gave a reasonably good value to the existing facilities in the housing, especially worship.

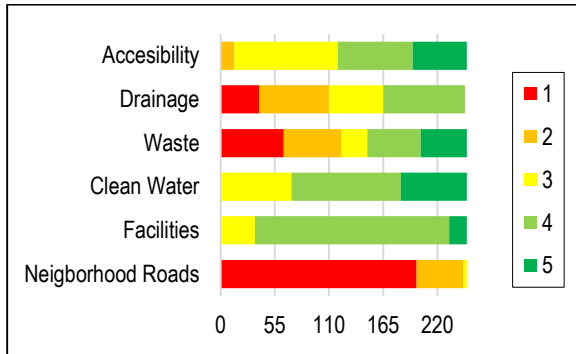


Figure 3. Community Assessment of the Quality of the Residential Environment (Assessed environmental indicators)

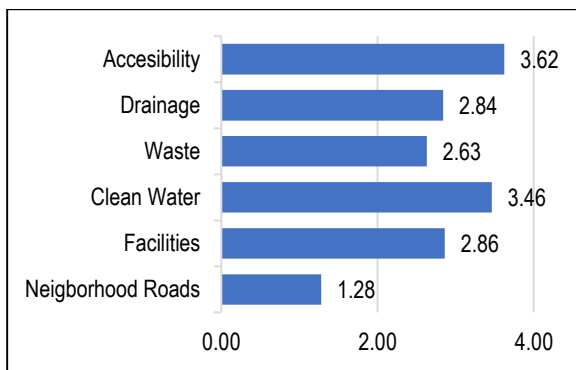


Figure 4. Level of occupant satisfaction with environmental quality

Figure 4 shows community satisfaction with the environment with the highest score on housing accessibility to designated urban spaces, such as work, school, or shopping centers. Meanwhile, people feel very dissatisfied with the environmental road conditions

3.4. Discussion

The community's assessment of the condition row houses in Makassar indicated that the level of satisfaction with the building facade with an assessment score is satisfied, where this is due to the initial interest of the community to buy row houses, one of which is because of interest in the row house design. The design in question is the shape or style of the house offered or the colors for an attractive house. This is in line with [7] through a visual experiment that considers the facade's technical aspects by the occupants' preferences, where it is said that the characteristics of the facade are a factor in which residents are willing to pay higher for occupancy.

Community dissatisfaction with the condition of space requirements is influenced by the need for activities that are not accommodated due to the limited space provided by row houses. [8] research identifies

the basic layout that forms row houses in Indonesia, consisting of a reception area, bedroom, dining room as a link to all rooms, and a kitchen size ranging from 30-70 m². This insufficiency impacts the desire of residents to renovate the dwelling to complement their space needs.

4. CONCLUSION

The satisfaction of row house occupants in Makassar on the quality of the environment is on average higher than the community's satisfaction with the quality of the building. This shows that the character of the quality of the row house and its environment has a significant impact on community satisfaction. Individuals' perspectives on satisfaction may vary according to their culture, social status, and expectations.

REFERENCES

- [1] J. Caldieron, "Residential satisfaction in la perla informal neighborhood, San Juan, Puerto Rico," *OIDA Int. J. Sustain. Dev.*, vol. 2, no. 11, pp. 77–84, 2011.
- [2] E. Tacoral, A. Atik, B. Yilmaz, F. Aslan, and M. F. Altunkasa, "A sustainability assessment of quality of life in a traditional settlement pattern: The case of Kemaliye, Turkey," *Indoor Built Environ.*, vol. 26, no. 4, pp. 456–470, 2017.
- [3] C. Li, L. Sun, and P. J. Jones, "Liveability of high-rise housing estates: a resident-centered high-rise residential environment evaluation in Tianjin, China," *thttht*, 2012.
- [4] D. Zhan, M.-P. Kwan, W. Zhang, J. Fan, J. Yu, and Y. Dang, "Assessment and determinants of satisfaction with urban livability in China," *Cities*, vol. 79, pp. 92–101, 2018.
- [5] M. A. Mohit and M. Azim, "Assessment of residential satisfaction with public housing in Hulhumale', Maldives," *Procedia-Social Behav. Sci.*, vol. 50, pp. 756–770, 2012.
- [6] M. S. Rahman, B. Hussain, A. N. M. M. Uddin, and N. Islam, "Exploring residents' satisfaction of facilities provided by private apartment companies," *Asia Pacific Manag. Rev.*, vol. 20, no. 3, pp. 130–140, 2015.
- [7] F. Riccardo, C. van Oel, and P. de Jong, "Redesign of affordable housing facades. preparation of a visual experiment," in *2010 ERES Conference*, 2010, pp. 23–26.
- [8] S. R. Ju, M. Maisarah, and M. K. Kim, "Identifying Space Grammar in the Unit Plans of Contemporary Indonesian Houses," *Archit. Res.*, vol. 21, no. 1, pp. 9–20, 2019.